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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/923,250	08/03/2001	William Laird	M0459/7021 DW	9145
23628	7590	12/14/2004	EXAMINER	
WOLF GREENFIELD & SACKS, PC FEDERAL RESERVE PLAZA 600 ATLANTIC AVENUE BOSTON, MA 02210-2211			YAN, REN LUO	
			ART UNIT	PAPER NUMBER
			2854	

DATE MAILED: 12/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/923,250	Applicant(s) LAIRD ET AL.	
	Examiner Ren L Yan	Art Unit 2854	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 December 2003 and 03 May 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 9-49 is/are pending in the application.
 4a) Of the above claim(s) 38-44 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 30-36 is/are allowed.
- 6) ☒ Claim(s) 1-7, 9-29, 37 and 45-49 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>5-24-04 and 9-2-04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-7, 9-29, 37 and 45-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Halloran(3,916,823) in view of Mitter(4,497,249). The patent to Halloran teaches a system for air embossing a surface of an embossable fabric as claimed including a cylindrical stencil 110 having an inside surface and a fabric-facing surface, and an air lance 128 or 212 comprising at least one nozzle 130 or 214 positioned with respect to the inside surface of the stencil 110 to emit a stream of gas supplied to the air lance through the openings 114 in the stencil 110 so as to impinge upon the surface of the embossable fabric 100. The stream of gas has sufficient velocity and collimation to create visible embossed depressions in the surface of the fabric 100 in pattern corresponding to a pattern of the openings 114 in the stencil 110. see Figs. 1-5 in Halloran for details. However, the air embossing system of Halloran does not show a stencil stabilizer constructed and positioned to apply a force to the stencil during operation of the system sufficient to reduce variation in a distance separating the embossable surface of the fabric and a portion of the fabric-facing surface of the stencil directly adjacent thereto during rotation of the stencil as recited. The patent to Mitter teaches in a rotary stencil printing machine for printing on a surface of a substrate including a cylindrical stencil 1 and at least one stencil stabilizer 2, 3'', 3a' or 3a'' constructed and positioned to apply a force to the stencil during the operation to

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prevent deformation of the stencil so as to reduce variations in a distance separating the surface of the substrate and a portion of the stencil surface directly adjacent the substrate surface. The above identified stencil stabilizers are positioned to apply a force to the inner surface of the stencil to ensure the distance between the surface of the substrate and the stencil surface remains substantially the same and an air lance system 55 integrally formed with the stencil stabilizer to supply pressurized air or gas through the openings in the stencil to the substrate surface 6. See Figs. 11-14, and column 9, line 61 through column 11, line 54 in Mitter for example. In view of the teaching of Mitter, it would have been obvious to those having ordinary skill in the art to provide the cylindrical stencil of Halloran with a stencil stabilizer appropriately disposed integrally with the air lance inside the cylindrical stencil as taught by Mitter in order to substantially maintain the distance between the surface of the fabric and the portion of the stencil surface directly adjacent the fabric surface in order to achieve consistent embossed depression patterns on the fabric surface. Regarding claims 5, 6 and 46 when the stabilizer of Mitter contacts the inner surface of the stencil at the lowest point of the stencil where it meets the substrate, it would inherently create a certain degree of tension and distortion in the stencil at that point. With respect to claims 9-13 and 25-28, Fig. 12 of Mitter shows that an air lance 55 with nozzles for supplying air or gas through the stencil is integrated into the stencil stabilizer 2. with respect to claims 14 and 15, the distance between the nozzle and the inner surface of the stencil in Mitter is self-adjustable based on the force applied to the outer surface of the stencil by the substrate and the counter pressure member on the other side of the substrate. Since the stabilizers 3''', 3a' or 3a'' are generally flexible and will flex under force, they will certainly adjust their positions based on the forces under which they operate. Additionally, when they

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flex, the resistance to being flexed increases and therefore, the level of force they apply to the inner surface of the stencil would be inversely proportional to the distance separating the nozzle from the inner surface of the stencil. Regarding claims 17 and 18, Mitter teaches in Figs. 11-14 the use of two stabilizers, one located upstream of the nozzle and one located downstream of the nozzle as recited. Regarding claims 19 and 29, the recited first and second distances are inherent features of the apparatus taught by Halloran, as modified by Mitter. With respect to claims 20-24, Halloran, as modified by Mitter teaches all that is claimed except for the recited differences in dimensions between the first and second distances. It is noted that the recited differences between the two distances span over a huge range from 0.001 inch to 0.1 inch with the top limit 0.1 inch exceeding the lower limit by 100 times. Due to the lack of disclosure showing any criticality and since a wide range of the differences between the two distances would equally work well, it would have been obvious to one of ordinary skill in the art to select the materials for the stabilizers of Halloran, as modified by Mitter, so that they would perform within the recited range or perform the way as desired to achieve an expected outcome. Regarding claim 49, when the integrally formed air lance and the stencil stabilizer appropriately positioned inside the stencil of Halloran, as modified by Mitter, the air nozzle would be in contact with the inner surface of the stencil through the stencil stabilizer when the system is in operation.

Claims 30-36 are allowed.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

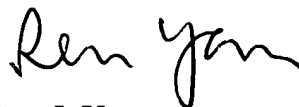
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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ren L Yan whose telephone number is 571-272-2173. The examiner can normally be reached on 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Hirshfeld can be reached on 571-272-2168. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Ren L Yan
Primary Examiner
Art Unit 2854

Ren Yan
Dec. 7, 2004